

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/50097

**A. CLASSIFICATION OF SUBJECT MATTER**  
 IPC 7 C07K14/52 A61K38/19

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
 IPC 7 C07K A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, SEQUENCE SEARCH, EMBASE, MEDLINE

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>HEMMERICH STEFAN ET AL: "Identification of residues in the monocyte chemotactic protein-1 that contact the MCP-1 receptor, CCR2"    BIOCHEMISTRY, AMERICAN CHEMICAL SOCIETY.    EASTON, PA, US,    vol. 38, no. 40,    5 October 1999 (1999-10-05), pages    13013-13025, XP002198634    ISSN: 0006-2960    cited in the application    figures 3,4; table 1    ---    -/---</p>	1,3-5, 7-21

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

## \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the International filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the International filing date but later than the priority date claimed

- \*T\* later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*Z\* document member of the same patent family

Date of the actual completion of the International search

4 August 2003

Date of mailing of the International search report

18/08/2003

Name and mailing address of the ISA

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	STEITZ S A ET AL: "Mapping of MCP-1 functional domains by peptide analysis and site-directed mutagenesis" FEBS LETTERS, ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, NL, vol. 430, no. 3, 3 July 1998 (1998-07-03), pages 158-164, XP004258051 ISSN: 0014-5793 cited in the application page 161, right-hand column, last line -page 162; figures 4,5 ---	1,3-5, 7-21
Y	SEET BRUCE T ET AL: "Molecular determinants for CC-chemokine recognition by a poxvirus CC-chemokine inhibitor." PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES, vol. 98, no. 16, 31 July 2001 (2001-07-31), pages 9008-9013, XP002250019 July 31, 2001 ISSN: 0027-8424 cited in the application page 9011, left-hand column; figure 3; table 1 ---	1,3-5, 7-21
Y	MAYER MICHAEL R ET AL: "Identification of receptor binding and activation determinants in the N-terminal and N-loop regions of the CC chemokine eotaxin." JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 276, no. 17, 27 April 2001 (2001-04-27), pages 13911-13916, XP002250020 ISSN: 0021-9258 cited in the application figure 4; table 1 ---	1,3-5, 7-13
A	CHAKRAVARTY LEENA ET AL: "Lysine 58 and histidine 66 at the C-terminal alpha-helix of monocyte chemoattractant protein-1 are essential for glycosaminoglycan binding." JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 273, no. 45, 6 November 1998 (1998-11-06), pages 29641-29647, XP002250021 ISSN: 0021-9258 cited in the application the whole document ---	-/-

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## C/(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>DAWSON JANET ET AL: "Targeting monocyte chemoattractant protein-1 signalling in disease."</p> <p>EXPERT OPINION ON THERAPEUTIC TARGETS.</p> <p>ENGLAND FEB 2003,</p> <p>vol. 7, no. 1, February 2003 (2003-02),</p> <p>pages 35-48, XP009014960</p> <p>ISSN: 1472-8222</p> <p>cited in the application</p> <p>the whole document</p> <p>-----</p>	

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### Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:

Although claims 14-17, 19-21 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

2.  Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3.  Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

### Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

1.  As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3.  As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4.  No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-5(partially), 6, 7-21(partially)

MCP mutants in positions 18 and 19, methods of producing them and use thereof.

2. Claims: Claims 1-5, 7-21 (all partially)

Mutants with one or both of the positions in aa 18 and/or 19 mutated having one or several further aa mutations. Methods for producing them and use thereof.